UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,231	02/16/2001	Sebastien Rosel	5974-74	4110

27383 7590 05/03/2005

CLIFFORD CHANCE US LLP
31 WEST 52ND STREET
NEW YORK, NY 10019-6131

EXAMINER	
STEVENS, THOMAS H	
ART UNIT	**PAPER NUMBER**
2123	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/788,231	ROSEL ET AL.	
	Examiner	Art Unit	
	Thomas H. Stevens	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,17-25 and 28-36* is/are pending in the application.

4a) Of the above claim(s) *14,15,26,27,37,38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,17-25 and 28-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/29/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-44 were previously examined.

2. Claims 14,15,26,27,37,38 were cancelled.

3. Claims 1-13,17-25,28-36 were examined.

Section I: Response to Applicant's Amendment

Information Disclosure Statement

4. Applicants are thanked for addressing this issue; however, applicants have not withdrawn prior art for reasons stated in the previous office action. Thus objection stands.

35 USC § 102

5. Applicants are thanked for addressing this issue. Applicant's arguments are persuasive to negate 102(e) rejection; however, new rejection is anticipated in light of applicant's amendment.

Section II: Final Office Action

Claim Rejections - 35 USC § 103

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-13,17-25,28-36 were rejected under 35 U.S.C. 103 (a) as obvious by Krishnamurthy (U.S. Patent 6,256,038 (1998)) in view of Oliver (U.S. Patent 5,510,995 (1996)), herein referred to as Kris. Krishnamurthy teaches a method for creating a smooth parameterization and fitting it to an input surface in a 3-D computer graphics system comprising specifying a plurality of boundary curves on the surface that define a patch of the surface. The boundary curves are typically specified using a user-interactive curve editing procedure, but may also be specified automatically (abstract); but doesn't teach whether control points are unrestricted. Oliver teaches a technique for the synthesis of sculptured surface models (abstract) with the capability of unrestricting control points (Oliver: column 11, lines 45-49).

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Kris by way of Oliver to allow the designer to control the shape of the surface by imposing boundary conditions and external loads (Oliver: column 1, lines 60-62).

Claim 1. A computerized method for manipulating a plurality of control points (Kris: column 51, lines 1-4) the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the method comprising (Kris: column 8, lines 26-34 and column 10, lines 49-51): adjusting the position of a control point in an intermediary row in the U direction to provide a smooth transition from the row of control points corresponding to a first edge along the U direction to a row of control points corresponding to a second edge along the U direction while retaining of control points in said first and second edges (Oliver: column 11, lines 45-49); adjusting the position of the control point in an intermediary row in the V direction to provide a smooth transition from the row of control points corresponding to a first edge along the V direction to a row of control points corresponding to a second edge along the V direction (Kris: column 18, lines 50-67 and column 19, lines 1-6) while retaining of control points in said first and second edges; and computing the new position of the control point based on the corresponding adjusted positions of the control point in the intermediary row in the U direction and the control points in the intermediary row in the V direction (Kris: column 21, lines 8-11 and lines 47-52).

Claim 2. The method of claim 1(Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein the plurality of control points define a surface (Kris; title).

Claim 3.The method of claim 2 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein the surface comprises a surface selected from the group consisting of a Béziers surface and a Nurbs surface (Kris: column 2, lines 1-7), wherein the surface is represented in a CAD system (Kris: column 45, lines 40-44).

Claim 4. The method of claim 2(Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein the surface comprises a three-dimensional surface (Kris: column 6, lines 9-19).

Claim 5. The method of claim 1 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein computing the new position additionally comprises averaging the adjusted position of the control point in the intermediary row in the U direction and the adjusted position of the control point in the intermediary row in the V direction (Kris: column 7, lines 6-11; column 18, lines 51-67 and column 19, lines 1-5).

Claim 6. The method of claim 1(Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising: determining a reference axis for the first edge along the U direction, the second edge along the U direction, the first edge along the V direction, and the second edge along the V direction, wherein the method of determining the reference axis comprises (Kris: column 8, lines 6-35, specifically: column 18, lines 51-67 and column 19, 1-5): for each edge: determining an X vector

comprising a first vector point located at a first extremity of the edge and a second vector point located at a second extremity of the edge(Kris: column 8, lines 6-35, specifically: column 18, lines 51-67 and column 19, 1-5); determining a Z vector comprising the average of two extreme vectors orthogonally adjusted to the X vector, wherein the two extreme vectors comprise a vector formed by an extremity point and its neighbor; and determining a Y vector comprising the vectorial product of the X vector and the Z vector (Kris: column 33, lines 15-67).

Claim 7. The method of claim 6 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein adjusting the position of a control point in an intermediary row in the U direction comprises adjusting the control point using the reference (Oliver: column 11, lines 45-49) axis for the first edge along the U direction and the second edge along the U direction; and wherein adjusting the position of a control point in an intermediary row in the V direction further adjusting the control point using the reference axis for the first edge along the V direction and the second edge along the V direction.

Claim 8. The method of claim 1(Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising: determining if a row of control points corresponding to a first edge along the U direction and the first row belongs in a first U plane (Kris: column 33, lines 15-67); determining if a row of control points corresponding to a second edge along the U direction and belongs in a second U plane (Kris: column

33, lines 15-67); and adjusting the control point using the first U plane and the second U plane, wherein the adjustment only occurs if the row of control points corresponding to the first edge along the U direction belongs in the first U plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 33, lines 15-67).

Claim 9. The method of claim 8 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising (Kris: column 33, lines 15-67): computing an adjusted U plane for the control point to provide a smooth transition between the first U plane and the second U plane (Kris: column 2, lines 28-31); and wherein adjusting the control point using the first U plane and the second U plane comprises projecting the control point on the adjusted U plane (Kris: column 33, lines 38-67).

Claim 10. The method of claim 8 further comprising (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49): determining if a row of control points corresponding to a first edge along the V direction and the second row belongs in a first V plane (Kris: column 33, lines 15-67); determining if a row of control points corresponding to a second edge along the V direction belongs in a second V plane (Kris: column 33, lines 15-67); and adjusting the control point using the first V plane and the second V plane, wherein the adjacent only occurs if the row of control points corresponding to the first edge along the V direction belongs in the first V plane and the

row of control points corresponding to the second edge along the V direction belongs in the second V plane (Kris: column 33, lines 15-67).

Claim 11. The method of claim 10 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising: computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 33, lines 15-67); wherein adjusting the control point using the first V plane and the second V plane comprises projecting the control point on the adjusted V plane (Kris: column 33, lines 15-67).

Claim 12. The method of claim 10 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising: computing an adjusted U plane for the control point to provide a smooth transition between the first U plane and the second U plane (Kris: column 33, lines 15-67); and computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 33, lines 15-67 and column 2, lines 29-31).

Claim 13. The method of 12 (Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) wherein adjusting the control point using the first U plane and the second U plane and adjusting the control point using the first V plane and the second V plane comprises projecting the control point on an intersection of the adjusted U plane and the adjusted V plane (Kris: column 33, lines 15-38).

Claim 16. The method of claim 1(Kris: column 8, lines 26-34 and column 10, lines 49-51; Oliver: column 11, lines 45-49) further comprising repeating the first adjusting step, second adjusting step, and computing step for each point that is not along the first edge in the U direction, second edge in the U direction, third edge in the V direction, and fourth edge in the V direction (Kris: column 33, lines 15-38).

Claim 17. A computerized method for manipulating a plurality of control points, the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the method comprising: (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38); determining if a row of control points (Oliver: column 11, lines 45-49) corresponding to a first edge along the U direction in a first U plane; determining if a row of control points corresponding to a second edge along the U direction and the in a second U plane (Kris: column 33, lines 15-38); and adjusting the control points using the first U plane and the second U plane, wherein the adjustment only occurs if the row of control points corresponding to the first edge along the U direction belongs in the first U plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 33, lines 15-38).

Claim I8. The method of claim 17 (Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the plurality of control points define a surface (Kris: column 33, lines 15-38 with figure 8).

Claim 19. The method of claim 17 (Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the surface comprises a surface selected from the group consisting of a Béziers surface and a Nurbs surface (Kris: column 45, lines 40-44), wherein the surface is represented in a CAD system (Kris: column 2, lines 1-7).

Claim 20. The method of claim 17 (Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the surface comprises a three-dimensional surface (Kris: column 6, lines 9-19).

Claim 21. The method of claim 18 (Kris: column 33, lines 15-38 with figure 8) further comprising: computing an adjusted U plane for the control point to provide a smooth transition between the first U plane and the second U plane (Kris: column 2, lines 28-30 and column 33, lines 15-67); wherein adjusting the control point using the first U plane and the second U plane comprises projecting the control point on the adjusted U plane (Kris: column 33, lines 15-67).

Claim 22. The method of claim (Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) further comprising: determining if a row of control points corresponding to a first edge along the V direction belongs in a first V plane (Kris: column 33, lines 15-67); determining if a row of control points corresponding to a second edge along the V direction belongs in a second V plane (Kris: column 33, lines 15-67); and adjusting the control point using the first V plane and the second V plane, wherein the adjustment only occurs if the row of control points corresponding to the first edge along the V direction belongs in the first V plane and the row of control points corresponding to the second edge along the V direction belongs in the second V plane (Kris: column 33, lines 15-67).

Claim 23. The method of claim 22(Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) further comprising: computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 33, lines 15-67); wherein adjusting the control point using the first V plane and the second V plane comprises projecting the control point on the adjusted V plane (Kris: column 33, lines 15-67).

Claim 24. The method of claim 22 (Kris: column 8, lines 26-34 and column 10, lines 49-51; column 33, lines 15-38; Oliver: column 11, lines 45-49) further comprising: computing an adjusted U plane for the control point to provide a smooth transition

between the first U plane and the second U plane; and computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 33, lines 15-67).

Claim 25. The method of 24 wherein adjusting the control point using the first U plane and the second U plane and adjusting the control point using the first V plane and the second V plane comprises projecting the control point on an intersection of the adjusted U plane and the adjusted V plane (Kris: column 33, lines 15-67).

Claim 28. A computerized method for manipulating a plurality of control points, the plurality of control points (Oliver: column 11, lines 45-49) forming a plurality of rows along two non-parallel directions U and V, the method comprising: determining if a row of control points corresponding to a first edge along the U direction and the first row belongs in a first U plane (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38); determining if a row of control points corresponding to a second edge along the U direction and the first row belongs in a second U plane (Kris: column 33, lines 15-38); and constraining the control point using the first U plane and the second U plane, wherein the constraining only occurs if the row of control point corresponding to a first edge along the U direction belongs in the first U plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 33, lines 15-38).

Claim 29. The method of claim 28 (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the network of control points defines a surface (Kris: column 33, lines 15-38 with figure 8).

Claim 30. The method of claim 29 (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the surface comprises a surface selected from the group consisting of a Béziers surface and a Nurbs surface (Kris: column 2, lines 1-7), wherein the surface is represented in a CAD system (Kris: column 45, lines 40-44).

Claim 31. The method of claim 28 (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein the surface comprises a three-dimensional surface (Kris: column 6, lines 9-19).

Claim 32. The method of claim 28(Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) further comprising (Kris: column 6, lines 9-19): computing an adjusted U plane for the control point to provide a smooth transition between the first U plane and the second U plane; wherein constraining the control point using the first U plane and the second U plane comprises constraining the control point on the adjusted U plane.

Claim 33. The method of claim 28 further comprising: (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49); determining if a row of control points corresponding to a first edge along the V direction and belongs in a first V plane (Kris: column 33, lines 15-38); determining if a row of control points corresponding to a second edge along the V direction belongs in a second V plane (Kris: column 33, lines 15-38); and constraining the control point using the first V plane and the second V plane, wherein the constraining only control if the row of control points corresponding to a first edge along the V direction belongs in the first V plane and the row of control points corresponding to the second edge along the V direction belongs in the second V plane (Kris: column 33, lines 15-38).

Claim 34. The method of claim 33 (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) further comprising: computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 33, lines 15-38); wherein adjusting the control point using the first V plane and the second V plane comprises constraining the control point on the adjusted V plane (Kris: column 9, lines 28-42;and column 33, lines 15-38).

Claim 35. The method of claim 33(Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) further

comprising: computing an adjusted U plane for the control point to provide a smooth transition between the first U plane and the second U plane (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38); and computing an adjusted V plane for the control point to provide a smooth transition between the first V plane and the second V plane (Kris: column 2, lines 28-31; and column 33, lines 15-38).

Claim 36. The method of 35 (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38; Oliver: column 11, lines 45-49) wherein constraining the control point using the first U plane and the second U plane and constraining the control point using the first V plane and the second V plane comprises constraining the control point to an intersection of the adjusted U plane and the adjusted V plane (Kris: column 9, lines 28-42;and column 33, lines 15-38)

Claim 39. A computer system for manipulating a plurality of control points, the plurality of control points (Oliver: column 11, lines 45-49) forming a plurality of rows along two non-parallel directions U and V, the system comprising: a computer, wherein the computer comprises a memory and a processor (Kris: column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38); and executable software residing in the computer memory wherein the software is operative with the processor to: adjust the position of a control point in an intermediary row in the U direction to provide a smooth transition from the row of control points corresponding to a first edge along the U direction to a row of control points corresponding to a second edge along the U

direction (Kris: column 33, lines 15-38) (Oliver: column 11, lines 45-49) while retaining positions of control points in said first and second edges; adjust the position of the control point in an intermediary row in the V direction to provide a smooth transition from the row of control points corresponding to a first edge along the V direction to a row of control points corresponding to a second edge along the V direction (Kris: column 9, lines 27-50 and column 33 lines 15-38) (Oliver: column 11, lines 45-49) while retaining positions of control points in said first and second edges; and compute the new position of the control point based on the corresponding adjusted positions of the control point in the intermediary row in the U direction and the control points in the intermediary row in the V direction (Kris: column 33, lines 15-33).

Claim 40. A computer data signal embodied in a digital data stream for manipulating a plurality of control points (Oliver: column 11, lines 45-49), the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the signal comprising the steps of (Kris: column 1, lines 1- 26; column 52, lines 1-3; column 29, lines 46-56 with figure 8; and column 33, lines 15-38): adjusting the position of a control point in an intermediary row in the U direction to provide a smooth transition from the row of control points corresponding to a first edge along the U direction to a row of control points corresponding to a second edge along the U direction (Kris: column 9, lines 27-43; column 33, lines 15-38) while retaining of control points in said first and second edges (Oliver: column 11, lines 45-49) while retaining positions of control points in said first and second edges; adjusting the position of the control point in an

intermediary row in the V direction (Oliver: column 11, lines 45-49) while retaining positions of control points in said first and second edges to provide a smooth transition from the row of control points corresponding to a first edge along the V direction to a row of control points corresponding to a second edge along the V direction while retaining of control points in said first and second edges; and computing the new position of the control point based on the corresponding adjusted positions of the control point in the intermediary row in the U direction and the control points in the intermediary row in the V direction (Kris: column 33, lines 15-38).

Claim 41. A computer system for manipulating a plurality of control points, (Oliver: column 11, lines 45-49)the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the system comprising (Kris: column 1, lines 1- 26; column 29, lines 46-56 with figure 8; column 33, lines 15-38): a computer, wherein the computer comprises a memory and a processor; and executable software residing in the computer memory wherein the software is operative with the processor to: determine if a row of control points corresponding to a first edge along the U direction in a first U plane (Kris: column 1, lines 1-26; column9, lines 27-43; column 44, lines 54-56; and column 51, lines 1-4) determine if a row of control points corresponding to a second edge along the U direction in a second U plane; and adjust the control point using the first U plane and the second U plane, wherein the adjustment only occurs if the row of control points corresponding to the first edge along the U direction belongs in the first U

plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 33, lines 15-38).

Claim 42. A computer data signal embodied in a digital data stream for manipulating a plurality of control points(Oliver: column 11, lines 45-49), the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the signal comprising the steps of: (Kris: column 1, lines 1- 26; column 29, lines 46-56 with figure 8; column 33, lines 15-38; and column 44, lines 54-67); determining if a row of control points corresponding to a first edge along the U direction in a first U plane; determining if a row of control points corresponding to a second edge along the U direction belongs in a second U plane (Kris: column 33, lines 15-38); and adjusting the control point using the first U plane and the second U plane, wherein the adjustment only occurs if the row of control points corresponding to the first edge along the U direction belongs in the first U plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 9, lines 27-50; and column 33, lines 15-38).

Claim 43. A computer system for manipulating a plurality of control points (Oliver: column 11, lines 45-49), the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the system comprising: a computer, wherein the computer comprises a memory and a processor (Kris: column 1, lines 1- 26; column 29, lines 46-56 with figure 8; column 33, lines 15-38; and column 44, lines 54-67); and

executable software residing in the computer memory wherein the software is operative with the processor to: determine if a row of control points corresponding to a first edge along the U direction belongs in a first U plane (Kris: column 33, lines 15-38); determine if a row of control points corresponding to a second edge along the U direction,belongs in a second U plane (Kris: column 33, lines 15-38); and the control point using the first U plane and the second U plane, wherein the constrain only occurs if the row of control points corresponding to a first edge along the U direction belongs in the first U plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 9, lines 27-50; and column 33, lines 15-38).

Claim 44. A computer data signal embodied in a digital data stream for manipulating a plurality of control points (Oliver: column 11, lines 45-49), the plurality of control points forming a plurality of rows along two non-parallel directions U and V, the signal comprising (Kris: column 1, lines 1- 26; column 29, lines 46-56 with figure 8; column 33, lines 15-38; and column 44, lines 54-67 the steps of:): determining if a row of control points corresponding to a first edge along the U direction and the first row belongs in a first U plane (Kris: column 33, lines 15-38); determining if a row of control points corresponding to a second edge along the U direction and the first row belongs in a second U plane (Kris: column 33, lines 15-38); and constraining the control point using the first U plane and the second U plane, wherein the constraining only occurs if the row of control points corresponding to a first edge along the U direction belongs in the first U

plane and the row of control points corresponding to the second edge along the U direction belongs in the second U plane (Kris: column 33, lines 15-38).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715, Monday-Friday (8:00 am- 4:30 pm) or contact Supervisor Mr. Kevin Teska at (571) 272-3716. Fax number is 571-273-3715.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

April 25, 2005

THS

KEVIN J. TESKA
SUPERVISORY
PATENT EXAMINER